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PROBLEMS FROM THE TUG MEETING

Framed Slides

At the July TUG meeting, Don Knuth conducted a Macro Wizards Roundtable. One problem raised was to define an output routine (to be used in constructing slides) that puts a rectangle around the completed page, with a variable-sized label appearing in a break in the bottom rule. Don's solution is:

```
\newdimen\fullsize
\fullsize = 7in
\output{\shipout\vbox{\hrule
                    \midpart
                    \nointerlineskip
                    \botline{macro for slides}}}}

\def\sleaders{\leaders\hrule height 2.4pt depth -2pt\hfil}
\def\botline#1{\setbox0=\hbox{\tenrm #1}\ht0 = 0pt
               \hbox to \fullsize{\sleaders\ \box0\ \sleaders}}
\def\midpart{\hbox to \fullsize
             {\vrule
              \hfil
              \innerbox
              \hfil
              \vrule }
             }
\def\innerbox{\vbox{\kern 10pt
                   \hbox to \hsize{\box 255}
                   \kern 10pt }
             }
```

Note that the font for the label is explicitly specified. Without the call to `\tenrm` in the `\botline` macro, a label would be printed in whatever font happened to be current when the page break occurred. Also note that the reference to `\box 255` in `\innerbox` is forced to `\hsize`; or one could use a definition from Plain, `\pagecontents`. Either variation would protect against the rare possibility of a generated page whose width is not the current `\hsize`.

Multiple Marks

Another question dealt with a need for multiple marks. Consider, for example, a glossary in which entries are numbered. It might be useful to place guide words in the heading on each page and "guide numbers" in the footing. T_EX's mark feature was specifically designed to save such labels, but only one mark can be specified at a time. While it is clear that the mark construct can be used for either guide words or guide numbers it is not obvious how to use it for both. Don suggested using T_EX82's `\ifcase` construct. For example, the macro that starts a new entry might expand to include an instruction such as

```
\mark{Dachshund\or 20}
```

if "dachshund" is the twentieth word entered. The output routine could use the construct

```
\ifcase\expandafter 0\topmark
```

to find the guide word in effect at the top of the page and

```
\ifcase\expandafter 1\topmark
```

to find the guide number.

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TUGBOAT MACRO INDEX

The following list catalogues macros that have appeared in TUGboat. Entries are listed by volume, number, and page as well as author's name. Items that could not be categorized by an obvious headword have been listed under "miscellaneous". Many items refer to parts of large macro packages; users of other packages may find them valuable models for macros of their own.

Readers' comments on the format as well as the contents of this index are welcome.

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